

# Dolphin Defenders

WHALE AND  
DOLPHIN  
CONSERVATION

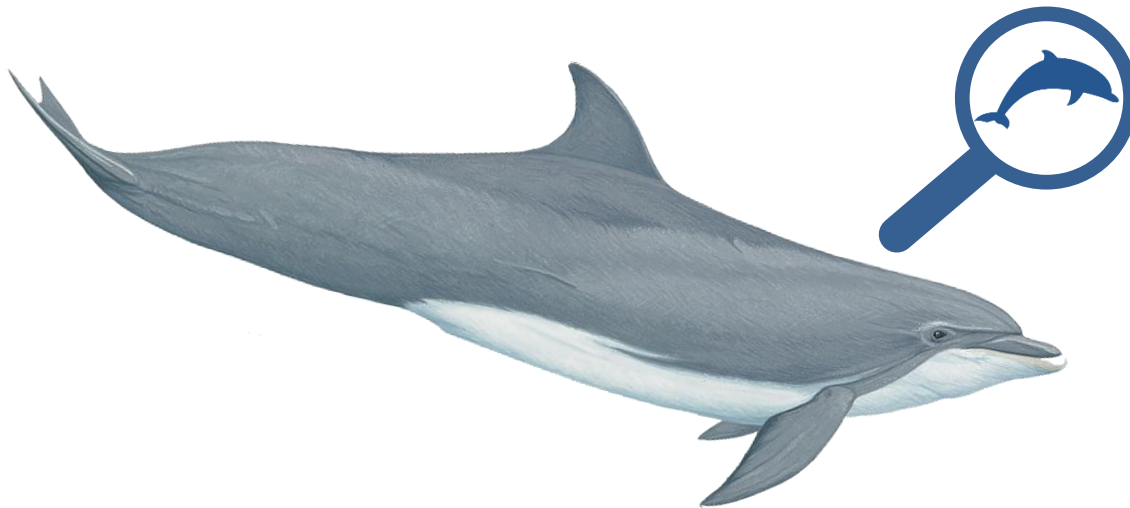


# DISCOVERY



# Dolphin Defenders: **DISCOVERY**

Welcome to WDC's Dolphin Defenders, where you will learn about amazing whales and dolphins and what you can do to help them.

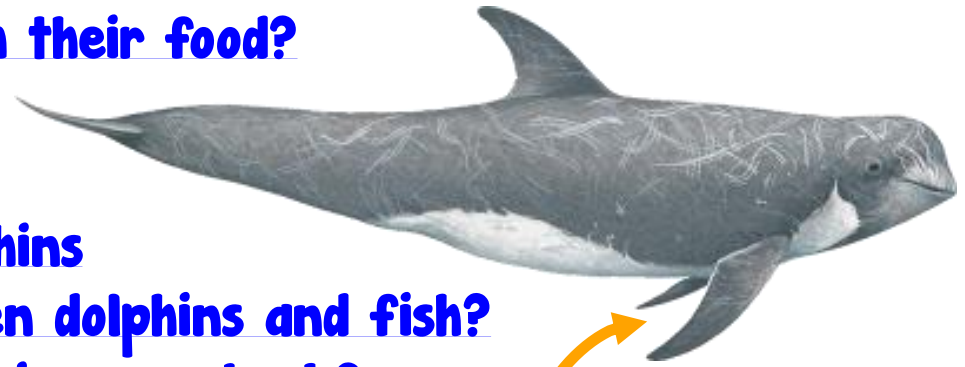


When you see the Dolphin Defenders **DISCOVERY** icon, click on it to find out more online.

# Dolphin Defenders: DISCOVERY

Click on one of the headings to jump to that section.

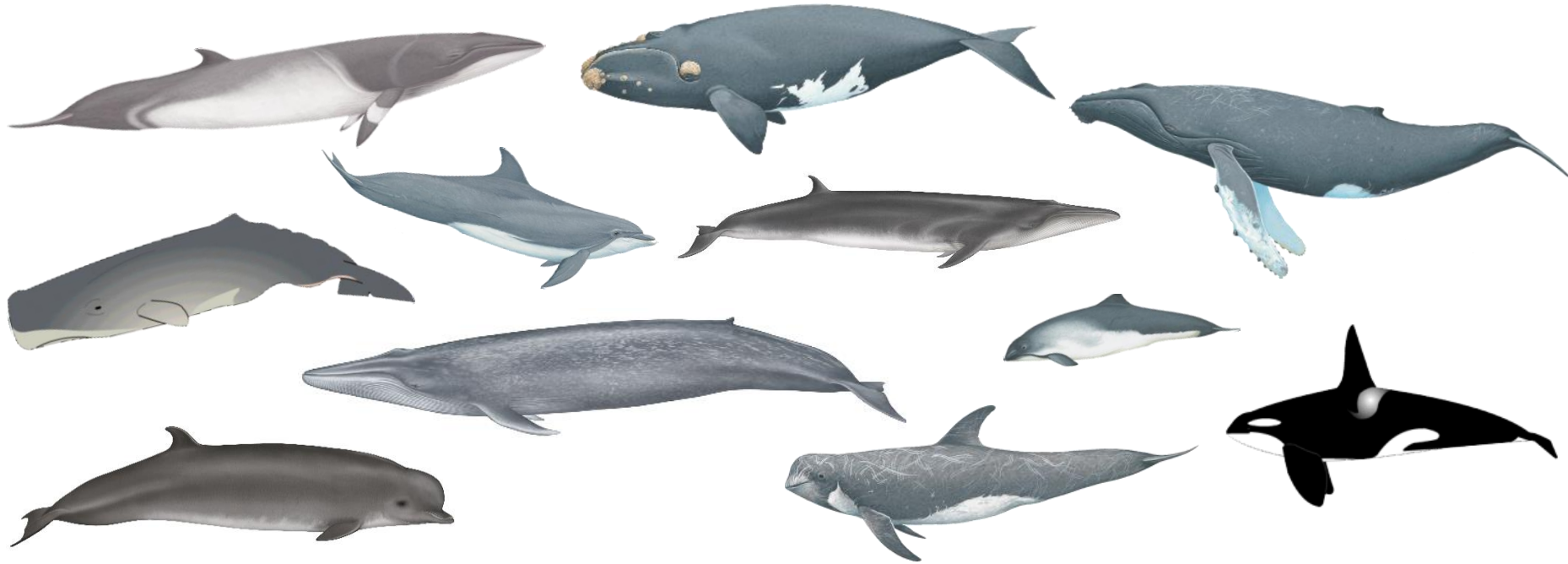
- [What is a cetacean?](#)
- [How do whales and dolphins catch their food?](#)
- [A dolphin's social life](#)
- [How do dolphins sleep?](#)
- [Record-breaking whales and dolphins](#)
- [What are the differences between dolphins and fish?](#)
- [Who would win in a fight, a dolphin or a shark?](#)
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Click on the Risso's dolphin to start at the beginning.

# AMAZING WHALES AND DOLPHINS

Whales, dolphins and porpoises are a group of mammals called **CETACEANS**.



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# AMAZING WHALES AND DOLPHINS

The ancestors of whales and dolphins lived on land. Modern whales and dolphins are now perfectly adapted to live their whole lives in water. They have smooth, streamlined bodies, flippers instead of legs and powerful tails for swimming.

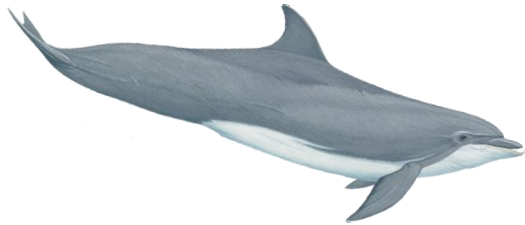
Their closest living relatives are hippopotamuses. They are also related to other even-toed hoofed animals such as sheep and deer.



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# How many different species are there?



**Dolphins**

**42**



**Porpoises**

**7**



**Whales**

**41**

**Did you know?**

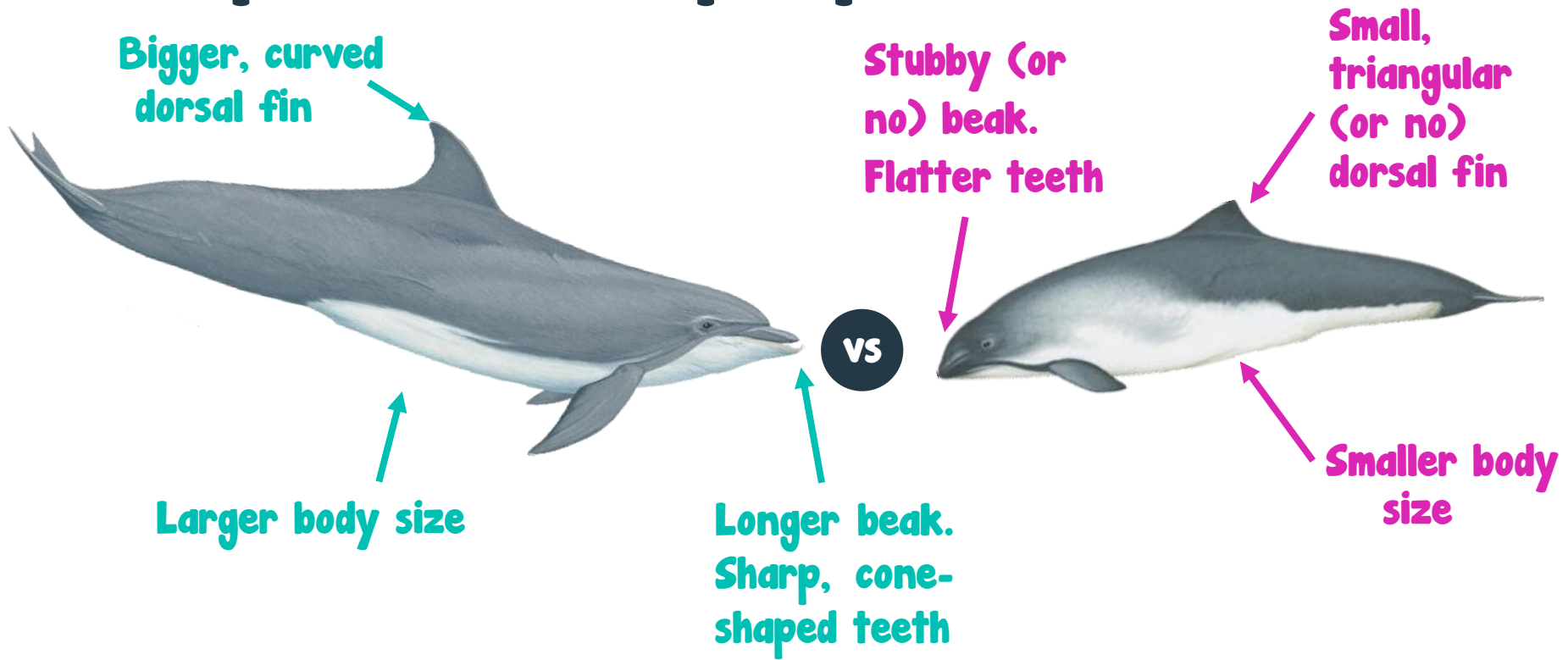
Although sometimes called a killer whale, the orca is actually a type of dolphin.



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# What are the differences between a dolphin and a porpoise?

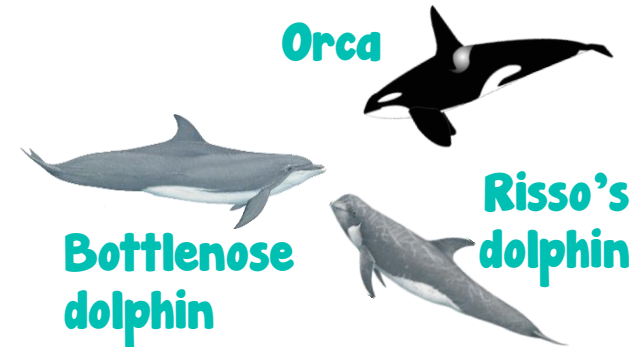
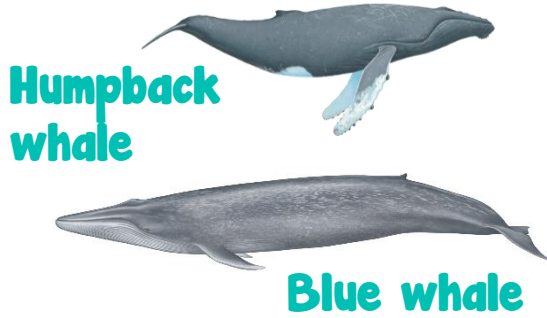


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# How do whales and dolphins catch their food?



90 species

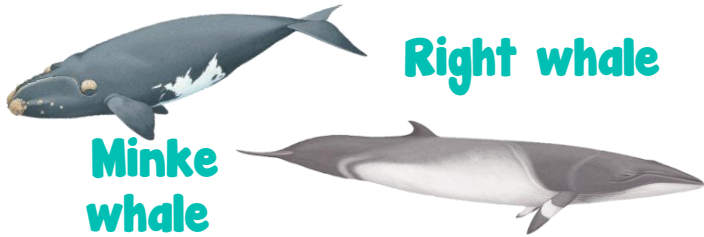
**Baleen**  
14 species

**Toothed**  
76 species

Filter huge amounts of krill and schooling fish from seawater

Hunt fish, squid and octopus one by one using echolocation

**What are krill?**  
Krill are small, (5cm) shrimp-like animals. They live in huge swarms. A blue whale can eat 40 million of them in one day.





# How do whales and dolphins catch their food?

## Baleen whales



Baleen whales are filter feeders. They have bristly baleen plates, made from keratin (like our fingernails) in their mouths. They feed on krill and small fish which get stuck between the bristles ready for the whale to lick off and swallow.



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Baleen image: CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=1752709>

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# How do whales and dolphins catch their food?

## Baleen whales



Baleen whales are sometimes called the **GREAT WHALES** because they are so impressively enormous and majestic.

Find out more about how they catch their food:



Blue whale lunge feeding



Humpback whale bubble-netting



Right whale skim feeding



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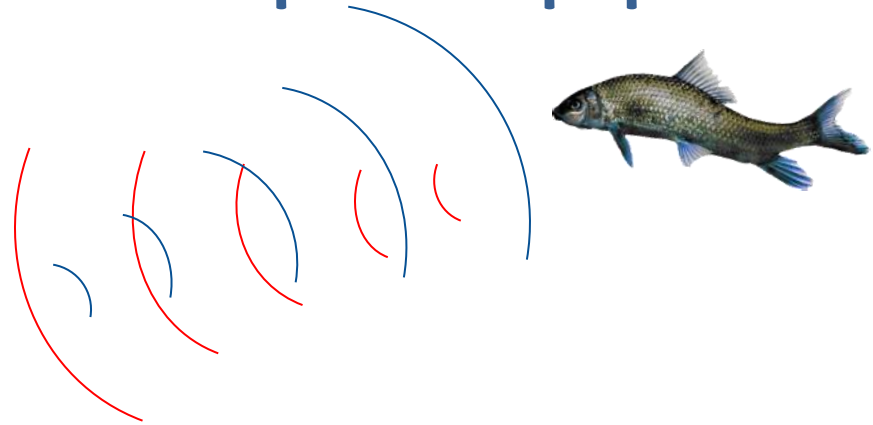
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# How do whales and dolphins catch their food?

## Toothed whales



Toothed whales (includes any whale with teeth, plus all dolphins and porpoises) can use their teeth to help catch fish, squid or other marine creatures. Toothed whales use echolocation (sonar) - they make a series of clicks and listen for the echoes bouncing back from their prey. This sonar picture enables them to locate and catch prey. Echolocation is an impressive superpower.



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# A dolphin's social life

Whales and dolphins are very social. They live together in groups called PODS.

## Whales and dolphins...

- ~ play with
- ~ hunt with
- ~ sing to
- ~ teach
- ~ look after
- ~ talk to
- ~ help
- ~ protect
- ~ and even babysit for ...each other!

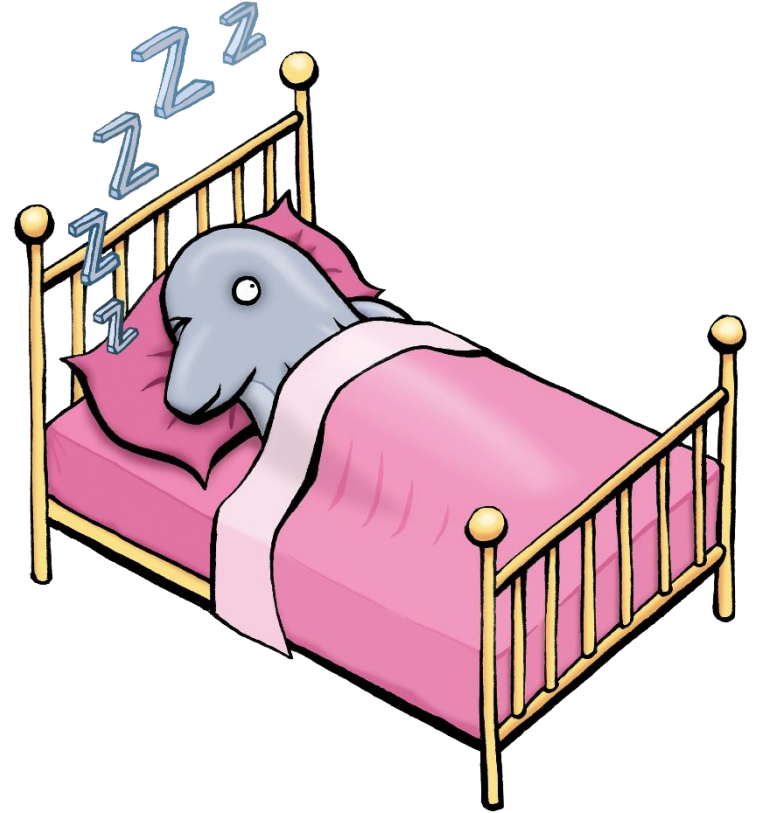


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# How do dolphins SLEEP?

We breathe without thinking, but dolphins can only breathe when they decide to. And so dolphins cannot become completely unconscious when they sleep, like we do, or they would stop breathing and drown.



**The answer?**

**Dolphins only let one half of their brain sleep at a time.**



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# RECORD BREAKERS

The biggest creature that has ever lived is the blue whale; their huge size dwarfs even the biggest dinosaurs.



Whale and dolphin record breakers



**BIGGEST**

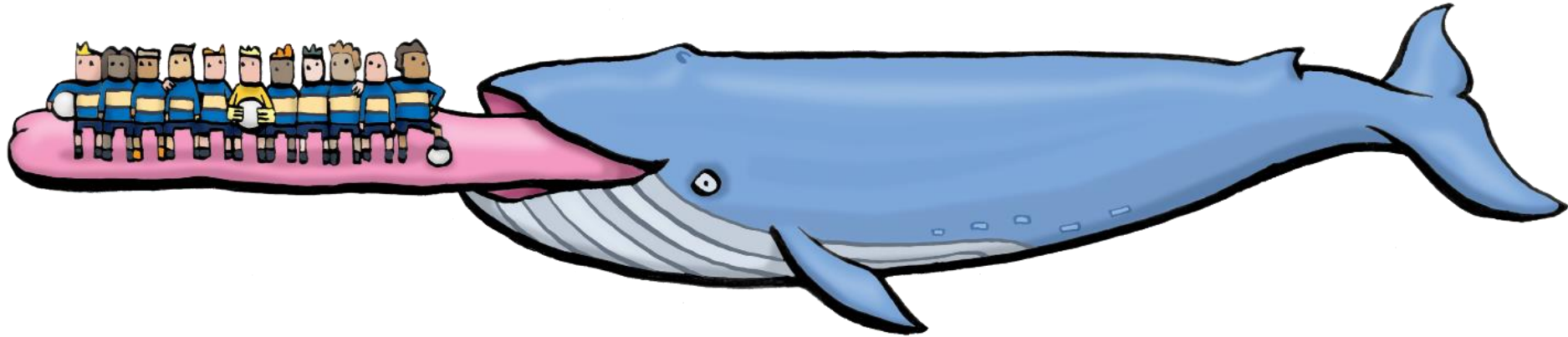


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# RECORD BREAKERS



A fully grown blue whale weighs up to 190,000kg (190 tonnes) and can be over **30 METRES LONG**. An entire football team could stand on a blue whale's tongue



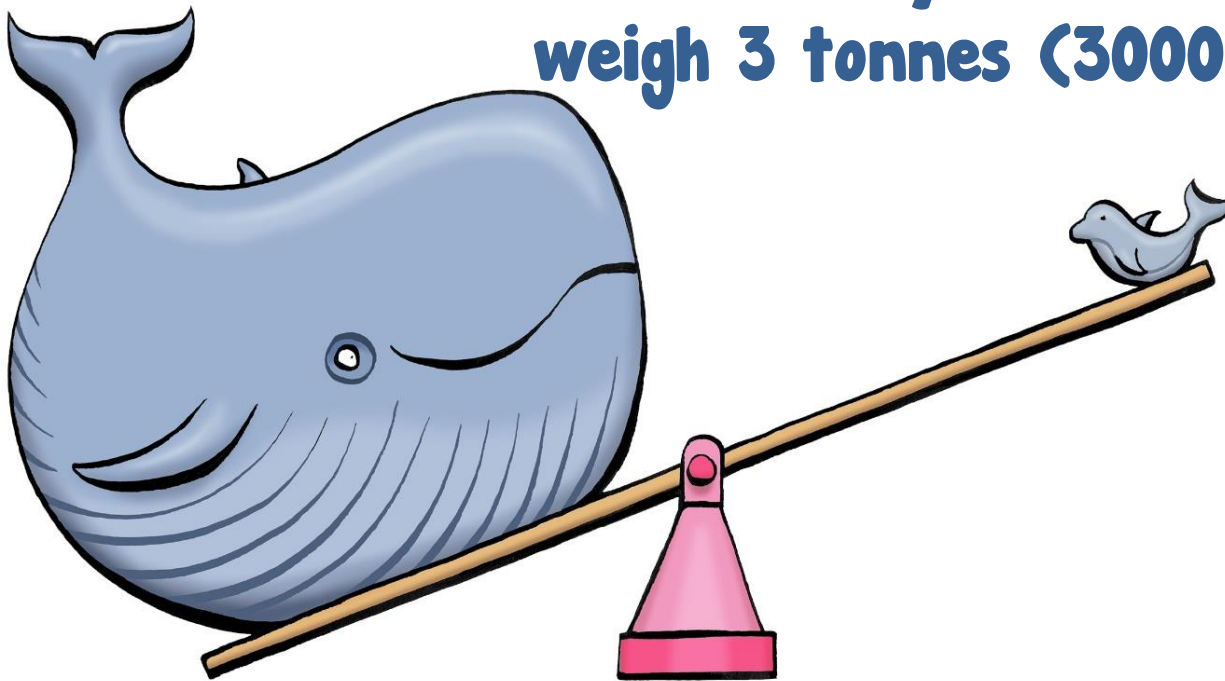
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# RECORD BREAKERS

Unsurprisingly, blue whales also have the **BIGGEST BABIES.**

A newborn baby blue whale can weigh 3 tonnes (3000kg)

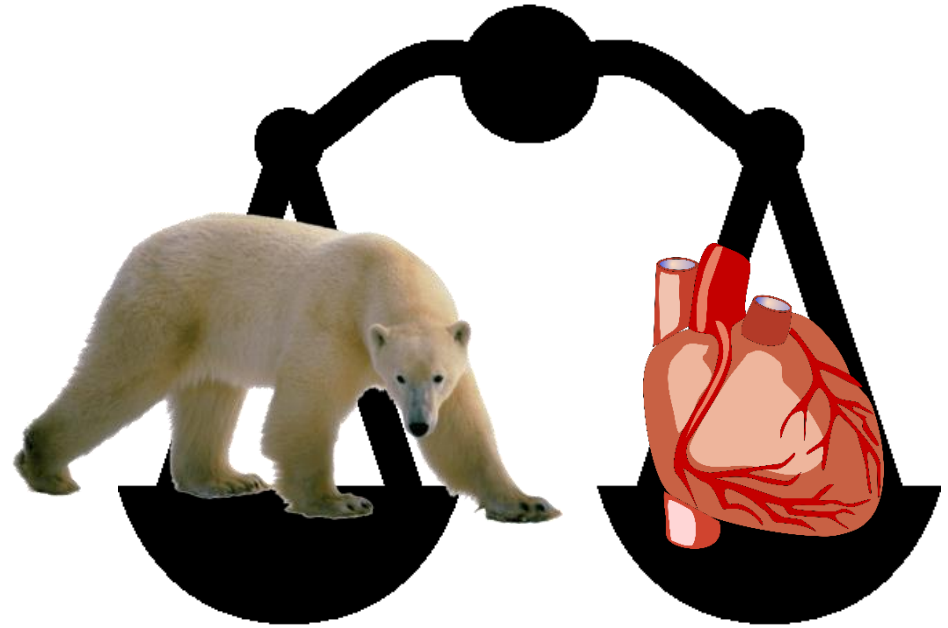


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# RECORD BREAKERS

The blue whale has the **BIGGEST HEART** - it weighs nearly half a tonne and is roughly the size of an adult male polar bear.



**Did you know?**

A blue whale's aorta, the main artery from the heart, is so big, you could crawl through it.

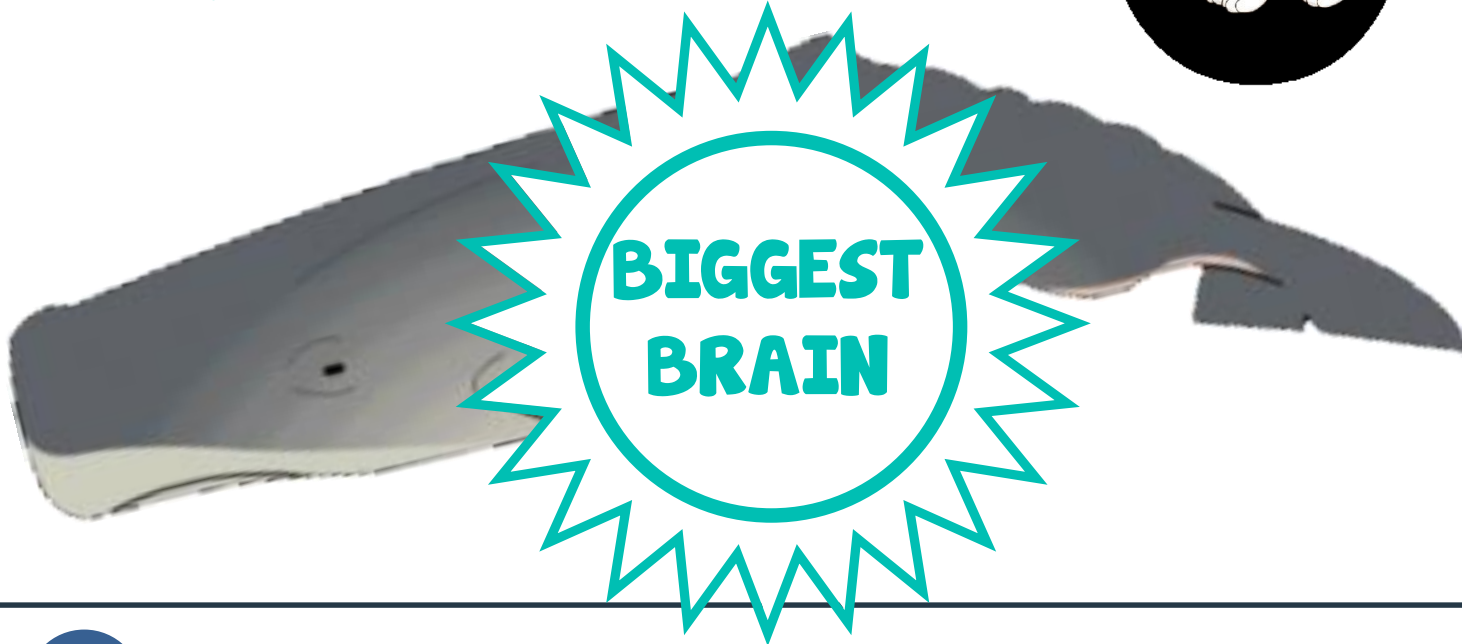
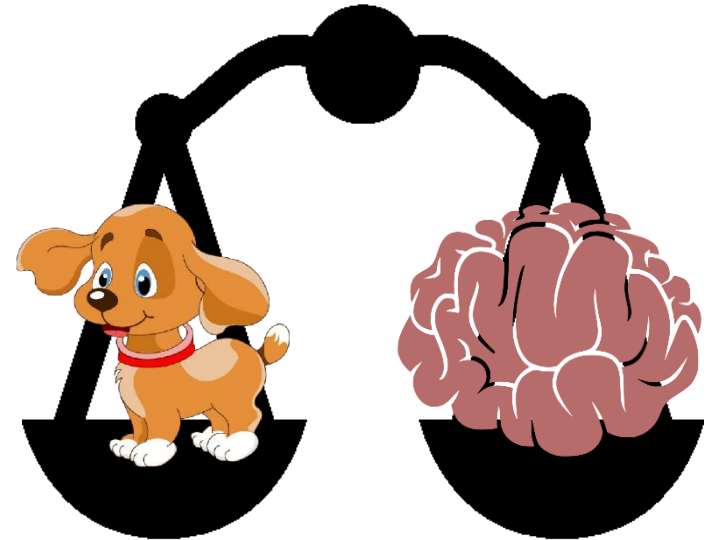


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# RECORD BREAKERS

Blue whales might have the biggest heart, but it's sperm whales that have the **BIGGEST BRAIN**. Their brain weighs 9kg (about the weight of a small dog) and is **6 TIMES BIGGER** than a human brain.



# RECORD BREAKERS

Cuvier's beaked whales can dive down to a depth of nearly 3000m or

**2 MILES**



**Incredibly, they can stay underwater and hold their breath for more than 2 HOURS**



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# RECORD BREAKERS

Some humpback whales migrate over 9800km (6090 miles) from Brazil to Madagascar.



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# RECORD BREAKERS

© Tom Jefferson



The vaquita is the smallest porpoise, only growing up to 1.5m long.

The vaquita is sadly also the most endangered porpoise, with only about 30 of them left in the world. Many of them have died trapped in fishing nets.



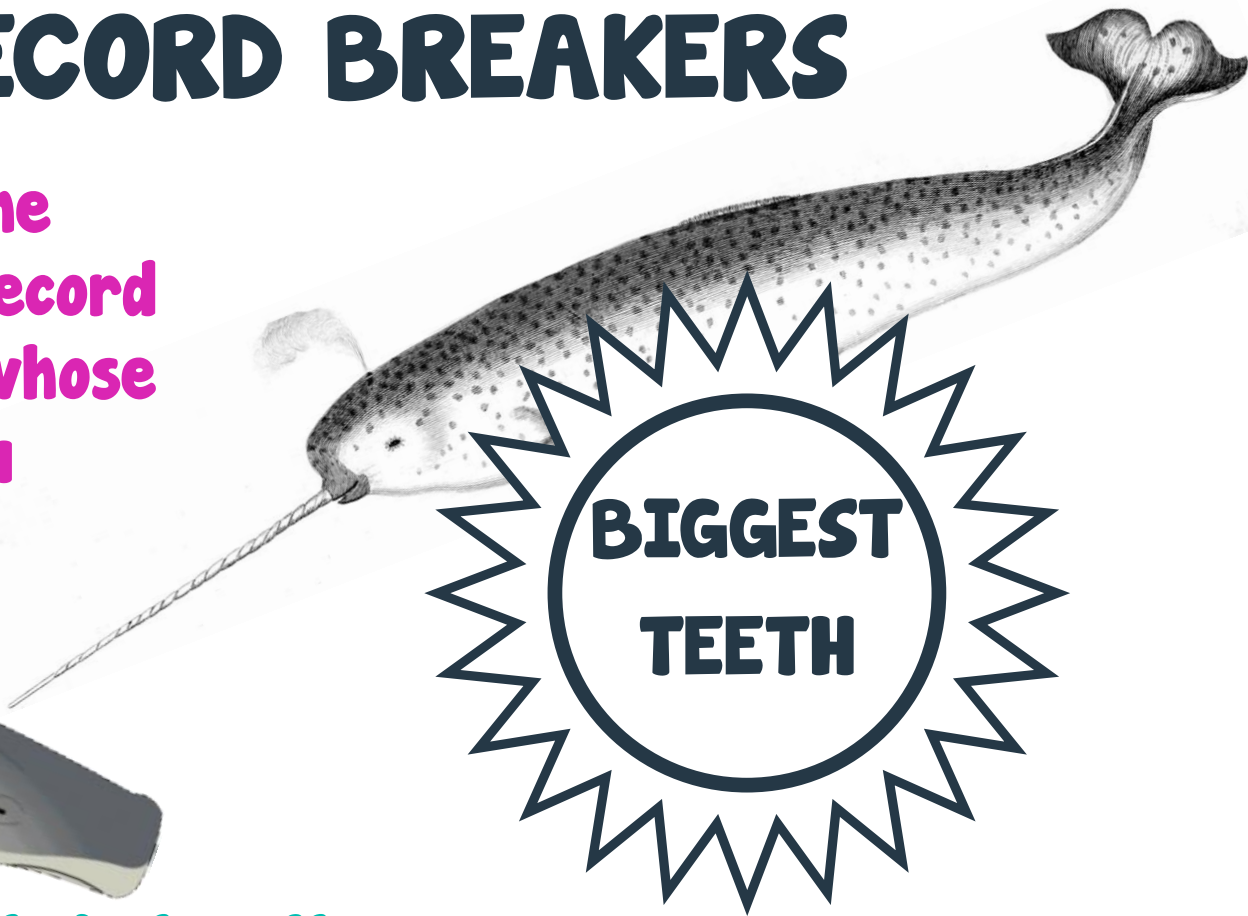
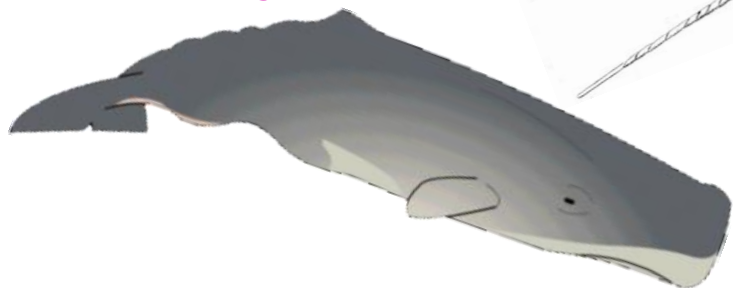
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Photo taken under permit (Oficio No. DR/488/08) from the Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT), within a natural protected area subject to special management and decreed as such by the Mexican Government.

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# RECORD BREAKERS

The winner of the biggest **TOOTH** record is the narwhal, whose tusk is actually a 3m-long tooth.



But the sperm whale has the biggest full set of teeth - each tooth is up to 20cm long.



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# RECORD BREAKERS

Humpback whale songs can be heard  
over **2,500KM (1,553 miles) AWAY**



**Humpback  
whale  
song**

**That's like shouting from the UK and being heard  
in Greece.**

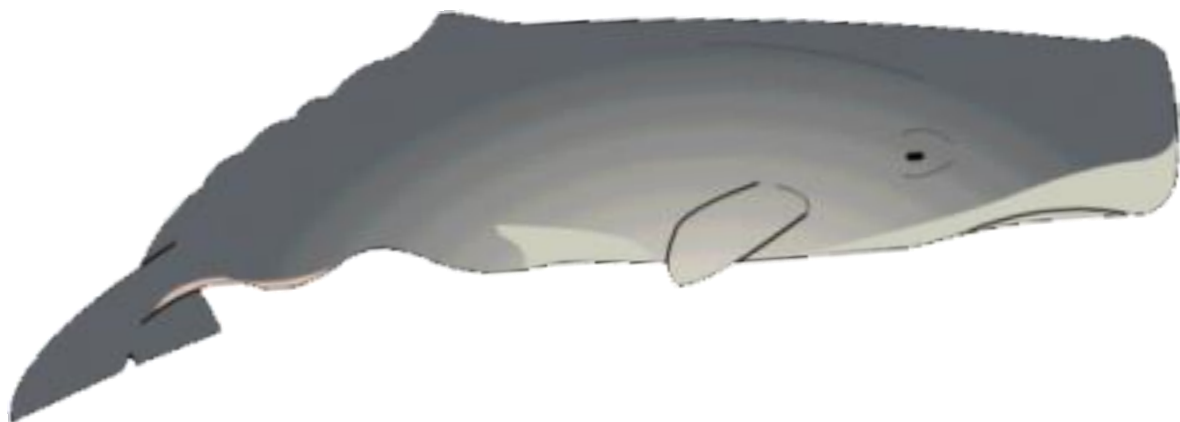


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# RECORD BREAKERS

Sperm whales don't sing, but they're even louder. Their clicks **REACH VOLUMES OF 235 DECIBELS**, much louder than a rock concert (115 decibels) or a jet engine (140 decibels)



This means sperm whales can talk to each other even if they're 60km (37 miles) apart



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# RECORD BREAKERS

Bowhead whales are the longest living of all mammals. They might even live to be over **200 YEARS OLD.**



Bowhead whales also win the prize for the **BIGGEST MOUTH** and the **LONGEST BALEEN.**

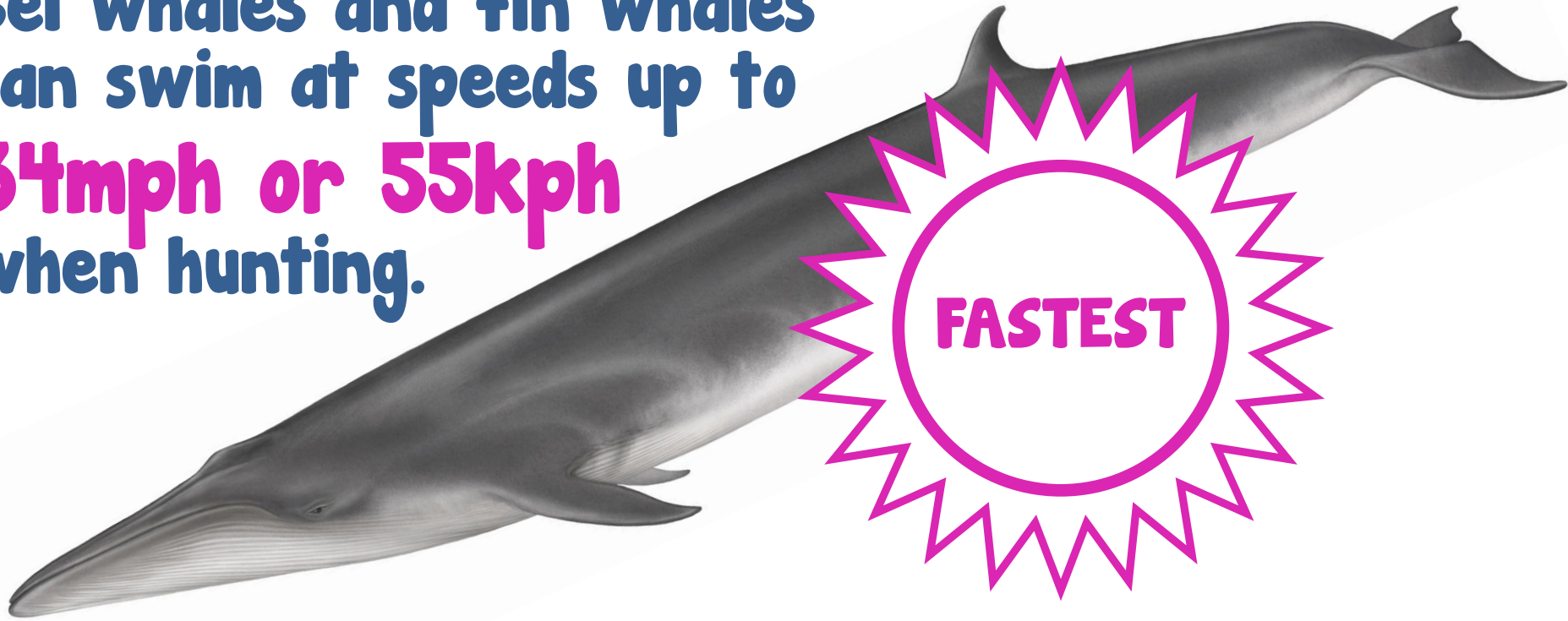


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# RECORD BREAKERS

Sei whales and fin whales  
can swim at speeds up to  
**34mph or 55kph**  
when hunting.



**DID YOU KNOW?** Because they're so fast, fin whales are sometimes nicknamed the greyhounds of the sea.



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**Whales, dolphins and porpoises are mammals, like us - they are not fish.**

**There are four main differences between dolphins and fish.**



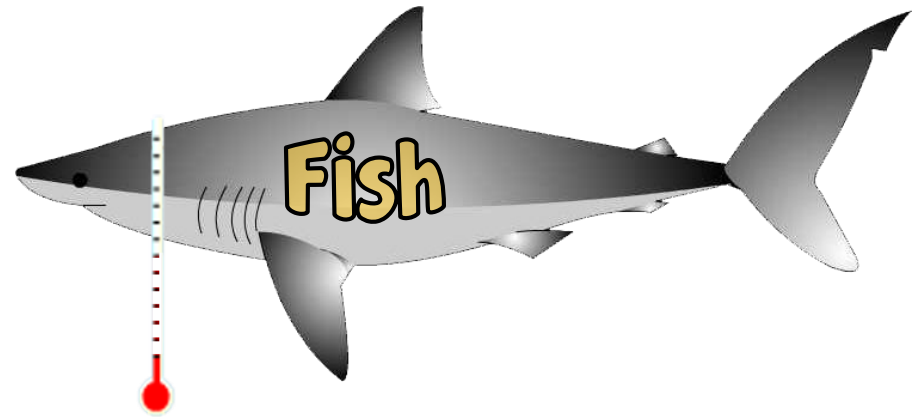
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# What are the differences?

1. Warm blooded

1. Cold blooded



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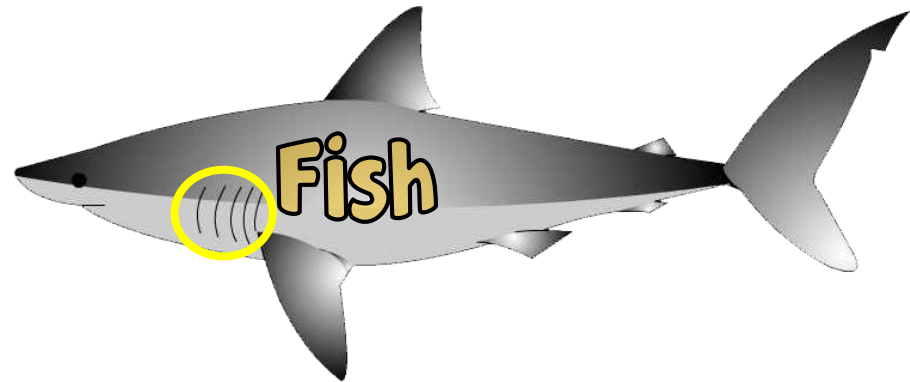
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# What are the differences?

2. Breathe air through lungs



2. Use gills to extract oxygen from water



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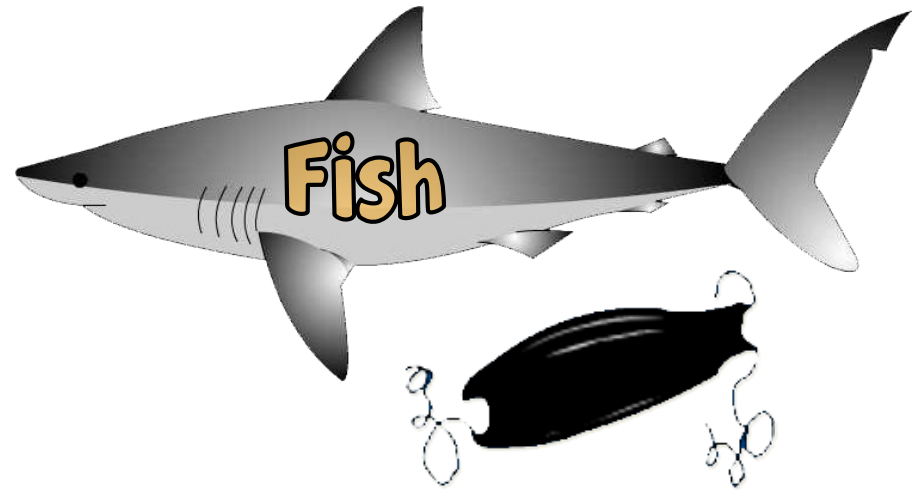
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# What are the differences?

3. Give birth to one baby every few years



3. Produce lots and lots of eggs (or babies)

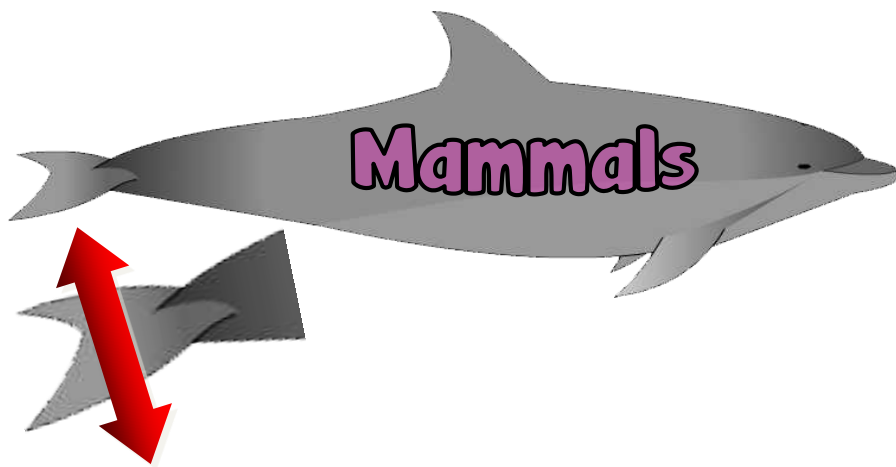


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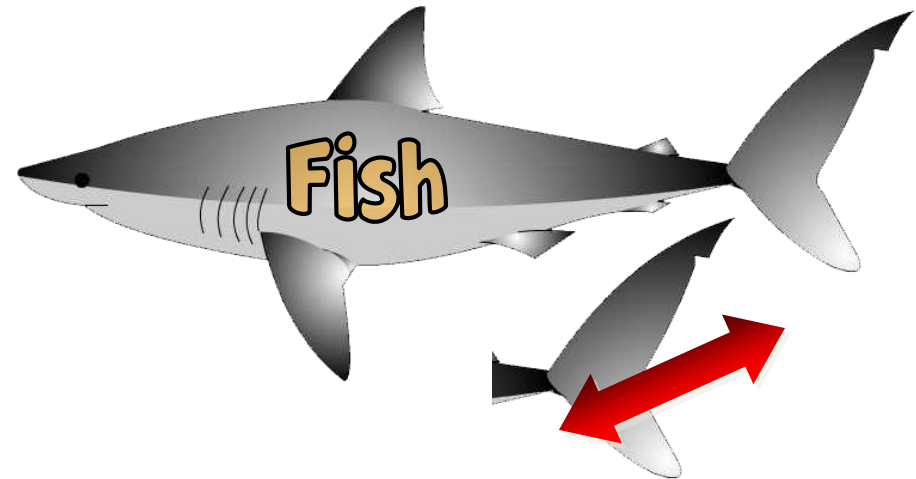
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# What are the differences?

4. Move tails  
up and down



4. Move tails  
side to side

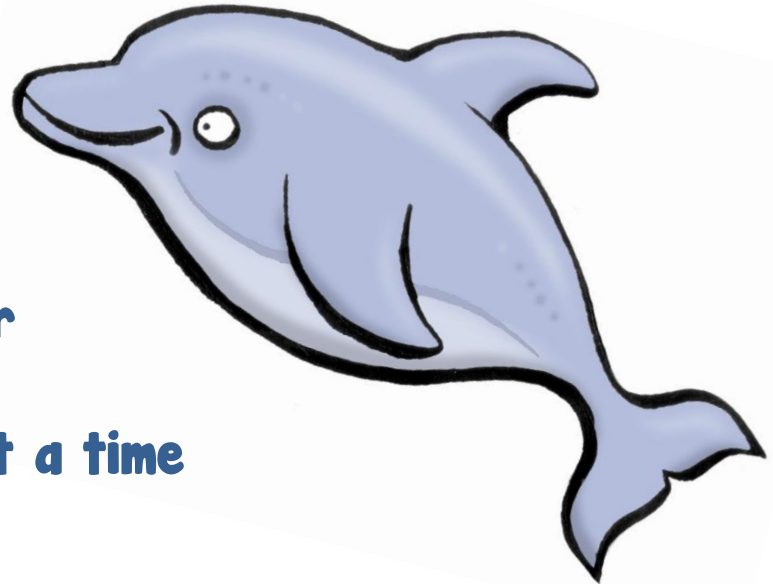


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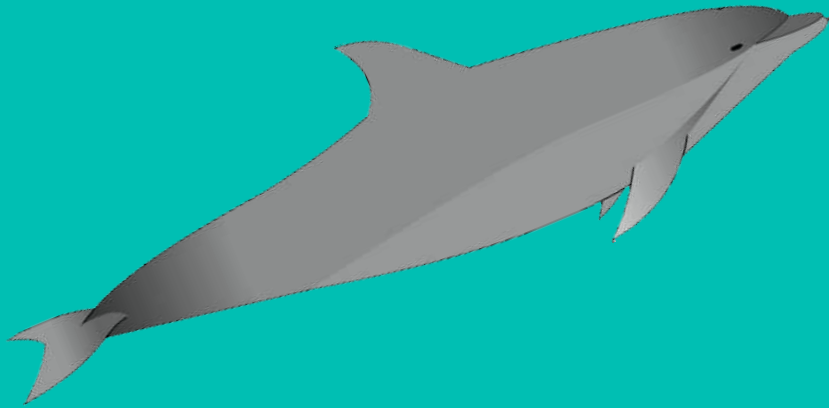
# So the four main differences between dolphins and fish are:

- ↪ **Dolphins are warm-blooded**  
**Fish are cold-blooded**
- ↪ **Dolphins breathe air**  
**Fish have gills and breathe underwater**
- ↪ **Dolphins give birth to one live baby at a time**  
**Fish mostly produce lots of eggs**
- ↪ **Dolphins pump their tails up and down**  
**Fish move their tails from side to side**

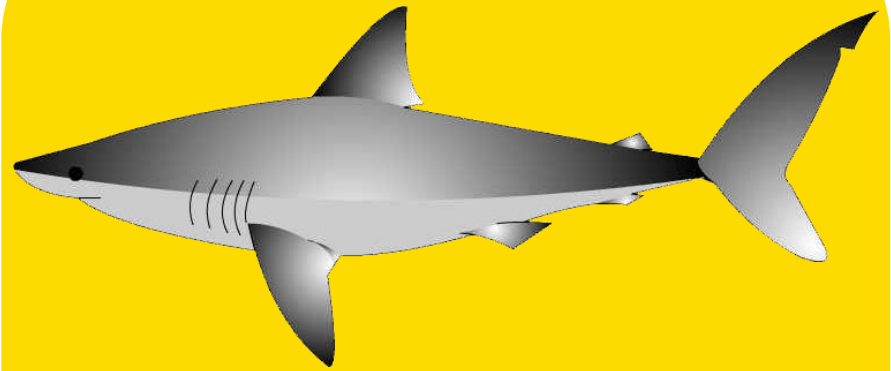




# Who would win in a fight between a dolphin and a shark?



**Vote  
DOLPHIN**



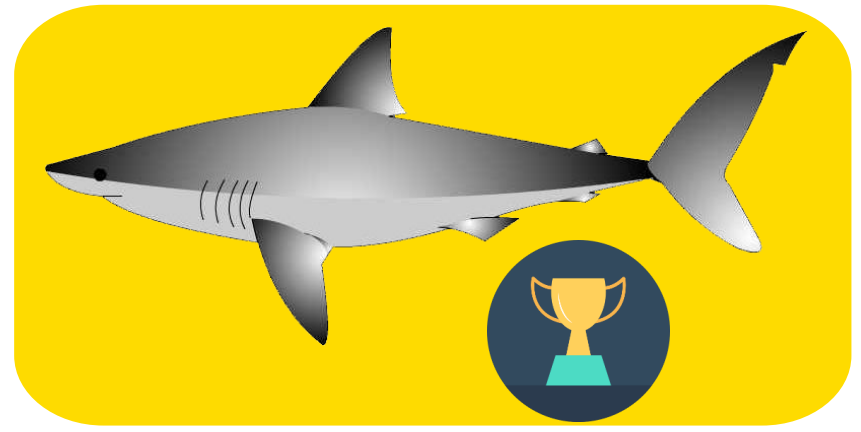
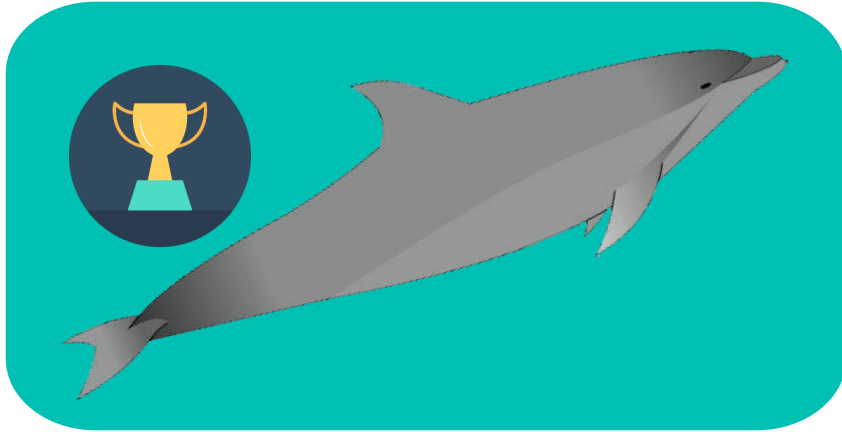
**Vote  
SHARK**



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# Actually, either of them could win!



Usually they stay away from each other, but when a shark attacks a dolphin, he or she can escape with just a shark bite scar. If a shark sneaks up on a dolphin and manages to hurt him or her, the shark will probably win. But dolphins have a big advantage - they look after one another and will work together to protect each other. Dolphins will gang up on a shark, chase it away and ram it with their beaks. Dolphins can outsmart sharks.



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# AMAZING WHALES AND DOLPHINS



**Dolphins  
use tools**



*Watch dolphins  
using sponges  
to protect  
their mouths  
and beaks.*



**Whales  
work  
together**

*Watch humpback  
whales bubble  
net feeding.*



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# AMAZING WHALES AND DOLPHINS

## Even whale poo is important....

Whales find food throughout the ocean and some dive deeply to feed, but they all poo near the surface.

Whale poo provides important nutrients for plankton living at the surface. In other words, whale poo supports the entire ocean food web.



Why is  
whale poo  
important ?



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# Endangered whales and dolphins

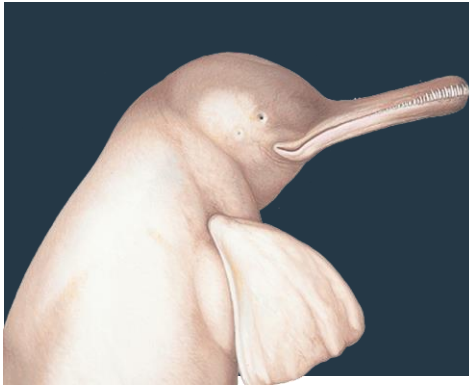
Some whales and dolphins are endangered, which means there are a lot fewer of them in the world now than there used to be. One species is extinct already and others are at risk of going extinct. Find out more about the threats to whales and dolphins:

**HUNTING**

**CAPTIVITY**

**BYCATCH**

**HABITAT  
DESTRUCTION**



The baiji or Chinese river dolphin was declared **EXTINCT** in December 2006. Many died in fishing equipment and a huge dam on the Yangtze River destroyed their only home.



**FIND  
OUT  
MORE**



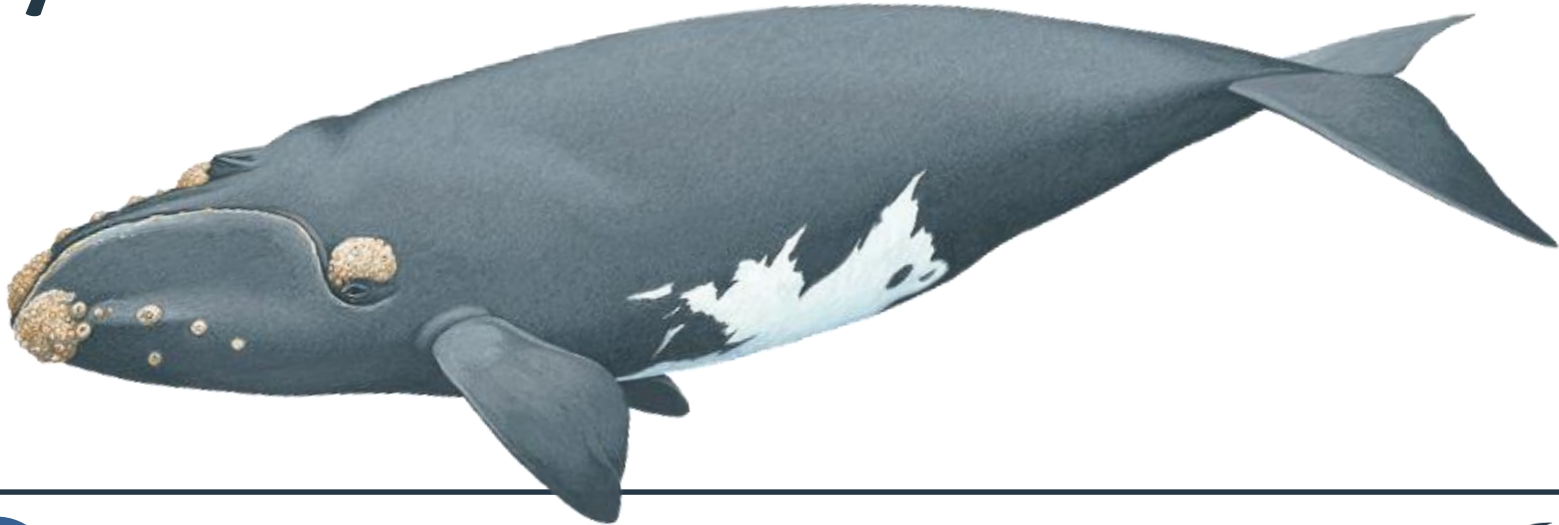
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# Threats to whales and dolphins

## 1. HUNTING

Right whales are so-named because whalers said they were the 'right' whales to hunt. So many whales were hunted in the past that many are now threatened or endangered. There are fewer than 450 North Atlantic right whales left in the world. They are on the brink of extinction.



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# Threats to whales and dolphins

## 2. CAPTIVITY



**Whales and dolphins kept in captivity are separated from their families and friends.**

**They suffer trapped in small tanks with no freedom. They have to eat dead fish and can't use echolocation. They die much younger than wild whales and dolphins.**



**It's very important not to swim with dolphins even if they're wild. Click to find out more.**



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# Threats to whales and dolphins

## 3. BYCATCH

Entanglement in fishing nets (bycatch) kills more whales and dolphins than any other threat. Every year, hundreds of thousands of individuals die a slow, painful death trapped and unable to get back to the surface to breathe. WDC is working with the fishing industry to make fishing safer.





# Threats to whales and dolphins

## 4. HABITAT DESTRUCTION

Whale and dolphin habitats are being damaged by pollution, including chemical, plastic and noise. Underwater noise interferes with their ability to use sounds and echolocation to communicate, navigate and find prey. Overfishing depletes their food supplies, and they are threatened by the impacts of climate change and changing ocean conditions.



Find out more  
about plastic  
pollution and how  
you can help  
**#NOTWHALEFOOD**



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www.whales.org

**DISCOVER**  
even more  
online

**Whale  
facts**

**WDC's  
work**

**All 90  
Species**

**Dolphin  
facts**

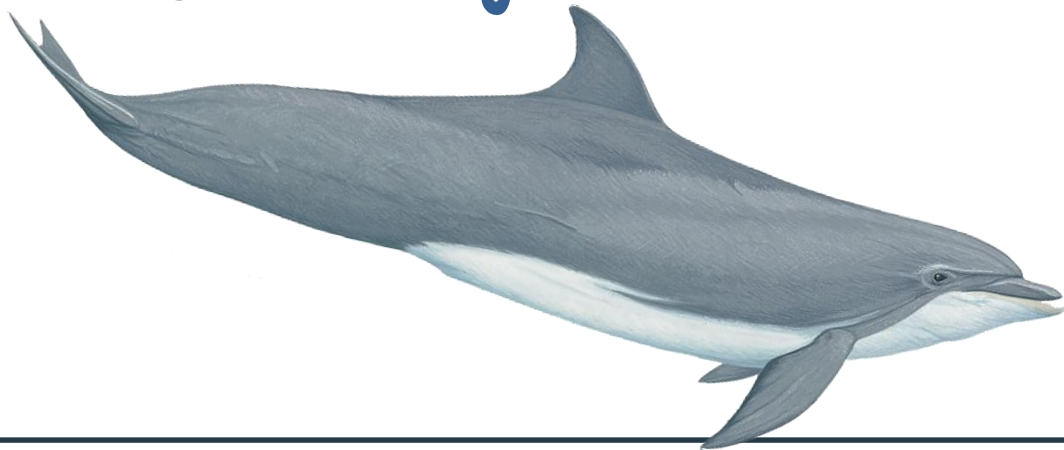


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# To complete the **DISCOVERY** part of your Dolphin Defenders Award:

1. Complete the **QUIZ**
2. Complete a Discovery **CHALLENGE**
3. Ask an adult to send us your quiz answers and photos or a summary of your completed challenge to [education@whales.org](mailto:education@whales.org)



**QUIZ**

**CHALLENGES**



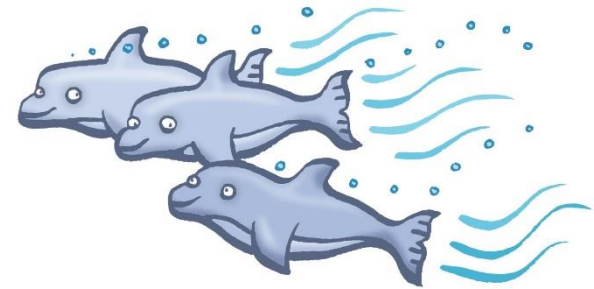
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# DISCOVERY Quiz

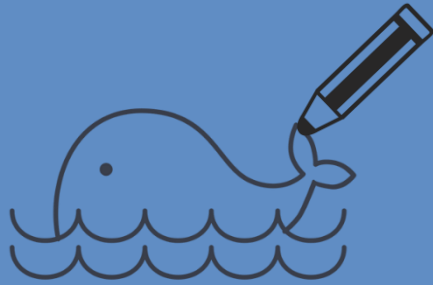
CHALLENGES

1. What are the differences between dolphins and fish?
2. How do dolphins sleep?
3. How deep can a Cuvier's beaked whale dive?
4. How far can a humpback whale travel on migration?
5. How long is a narwhal's tusk?
6. How do toothed whales find their food?
7. What threat causes the most whale and dolphin deaths?
8. When was the baiji (Chinese river dolphin) declared extinct?
9. How many North Atlantic right whales are left in the world?
10. Why is whale poo so important for ocean food webs?



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Paint, draw or make a collage of a threatened or endangered whale or dolphin species and send it to WDC



Write a story for young children about whales or dolphins, with pictures to illustrate it



Create a game about whales and dolphins such as Top Trumps or a board game



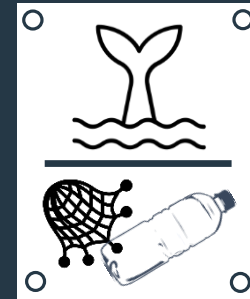
Don't forget to take photos of your challenge!



Design a way to remove litter from the ocean, or to stop it from getting there in the first place



Draw a design for a safe fishing net to catch fish but not whales and dolphins



Design a poster showing habitats that are good and bad for whales and dolphins

QUIZ



## DISCOVERY: Challenges

Complete one of these challenges using what you've learnt about whales and dolphins